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EXAMINER

HUYNH, CONG LAC T

ART UNIT PAPER NUMBER

2178

DATE MAILED: 09/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/173,858

Applicant(s)

MELTZER ET AL.

Examiner

Cong-Lac Huynh

Art Unit

2178

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 May 2004.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 and 61-72 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-16 and 61-72 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____

DETAILED ACTION

1. This action is responsive to communications: response filed on 5/6/04 to the application filed on 10/16/98.
2. Claims 1-16, 61-72 are pending in the case. Claims 1 and 61 are independent claims.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identical disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-16, 61-72 remain rejected under 35 U.S.C. 103(a) as being unpatentable over McKendrick, *Banks begin to play with XML*, Bank Technology News, Sep 1998, Vol. 11, Iss. 9, pg. 6, 2 pgs, in view of W3C, *Extensible Markup Language (XML) 1.0*, 2/10/98, pages 1-37 (from the IDSs).

Regarding independent claim 1, McKendrick discloses:

- a machine-readable specification of an interface to transaction processes stored in memory accessible by at least one node in the network, including interpretation information providing a definition of an input document, and a definition of an output document (pages 1-2: McKendrick discloses applying XML in financial area to provide better bank services and utilizing XML for on-line business transactions involved with manipulation and transfer of data in the Internet such as purchase orders, invoices, and customer information. The purchase orders are considered as input documents, and the invoices are considered as output documents of the purchase orders in business transactions. Since the purchase orders as well as the invoices, which are the input and output documents, are in XML, they definitely include information providing the definition for such a document according to XML structures. And since the transaction documents are in XML format, these documents are machine-readable documents and should be stored in memory of a server accessible by at least one node in the network)

McKendrick does not explicitly disclose that the definitions of the input document and the output document comprising respective descriptions of sets of storage units and logical structures for the sets of storage units.

W3C discloses that each XML document comprises respective descriptions of set of storage units and logical structures for the set of storage units (page 3, Introduction:

"XML documents are made up of *storage units* called entities, which contain either

Art Unit: 2178

parsed or unparsed data. Parsed data is made up of characters, some of which form character data, and some of which form *markup*. *Markup encodes a description of the document's storage layout and logical structure*. XML provides a mechanism to impose constraints on the storage layout and logical structure.")

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to have combined McKendrick into W3C for the following reason.

McKendrick discloses the transaction documents such as the purchase orders and the invoices in XML format for a business transaction over the Internet where a user can search and buy an item on-line, and W3C discloses the structures of an XML document which comprises storage units and the logical structures for the set of storage units.

This motivates to combine W3C into McKendrick for supporting the business transaction documents in XML format using the XML characteristics disclosed in W3C.

Regarding claim 2, which is dependent on claim 1, McKendrick does not disclose that the interpretation information includes data type specification for at least one logical structure in the definitions of the input and output document.

W3C discloses that each XML document contains one or more elements which are delimited by starts-tags and end-tags, and each element has a *type* identified by name called generic identifier and may have a set of *attribute specification* (page 13, Logical structure).

As mentioned in claim 1, since the documents used in the purchase transaction in McKendrick are in XML format, these documents inherit the features of a general XML

Art Unit: 2178

document as disclosed in W3C. This is applied for all the claims relating to the transaction document structures and W3C is used for rejecting.

Regarding claim 3, which is dependent on claim 1, W3C discloses that the interpretation information includes at least one data structure mapping predefined sets of storage units for a particular logical structure in the definition of the input and output documents, to respective entries in a list (pages 14-17).

Regarding claims 4 and 5, which are dependent on claim 1, McKindrick and W3C do not disclose explicitly that a repository in memory accessible by at least one node in the network storing a library of logical structures, interpretation information for logical structures, and the identifier of a transaction. However, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to have modified McKindrick and W3C to include a repository in memory for storing logical structures and the identifier of a transaction interface since it was well known in the art that any defined data for a program in a network should have a name for identifying and should be stored in a memory of a server for using later on such as retrieving data, identifying data, or manipulating data.

Regarding claim 6, which is dependent on claim 1, W3C discloses that the machine readable specification includes a document compliant with a definition of an interface document including logical structures for storing an identifier of the interface, and for

Art Unit: 2178

storing at least one of specifications and references to specifications of a set of one or more transactions supported by the interface (page 13).

Regarding claim 7, which is dependent on claim 6, McKindrick does not disclose a reference to a specification of a particular transaction, and the specification of the particular transaction includes a document including logical structures for storing at least one of definitions and references to definitions input and output documents for the particular transaction. Instead, McKindrick discloses *applying XML for business-to-business transaction where data such as purchase orders and invoices are manipulated and transferred over the Internet* (page 2).

W3C discloses that each XML document comprises respective descriptions of set of storage units and logical structures for the set of storage units (page 3, Introduction: "XML documents are made up of *storage units* called entities, which contain either *parsed or unparsed data*. Parsed data is made up of characters, some of which form character data, and some of which form *markup*. *Markup encodes a description of the document's storage layout and logical structure*. XML provides a mechanism to impose constraints on the storage layout and logical structure.")

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to have combined W3C into McKindrick to include a reference to a specification of a particular transaction which has logical structures for storing at least one of definitions and references to documents as in W3C for the particular business transaction as in McKindrick since a reference is considered as a name or an identifier

Art Unit: 2178

and the transaction documents in McKindrick such as the purchase orders and the invoices, considered as the input and output documents, must have a document name for identifying purpose.

Regarding claim 8, which is dependent on claim 1, W3C discloses that the storage units comprise parsed data (page 3, Introduction: "XML documents are made up storage units called entities, which contain either parsed or unparsed data...").

Regarding claim 9, which is dependent on claim 1, McKindrick does not explicitly disclose the parsed data in at least one of the input and output documents comprises:

- character data encoding text characters in the one of the input and output document
- markup data identifying sets of storage units according to the logical structure of the one of the input and output documents

Instead McKindrick discloses the business transactions involved with manipulation and transfer data such as purchase orders and invoices where invoices are considered as the output documents produced from the data portion of the purchase orders, which are considered as the input document (pages 1-2).

W3C discloses that the parsed data comprises:

- character data encoding text characters in XML documents (page 3, Introduction: "*XML documents* are made up storage units ...*Parsed data* is made up characters, some of which form *character data* ..."; page 6, Characters: "A

Art Unit: 2178

parsed entity contains text, a sequence of characters, which may represent markup or character data

- markup data identifying sets of storage units according to the logical structure of XML documents (page 3, Introduction: "*XML documents* are made up storage units ... *Parsed data* is made up characters, some of which form character data, and some of which form *markup*. *Markup encodes a description of the document's storage layout and logical structure ...*")

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to have combined W3C into McKindrick since the XML business documents in McKindrick which function as input and output documents should comprise parsed data with claimed features since these features are characteristics of an XML document as taught in W3C.

Regarding claim 10, which is dependent on claim 9, W3C discloses that at least one of the sets of storage units encodes a plurality of text characters providing a natural language word (page 6, Document, page 7, Characters and page 8, Character Data and Markup: since the storage units encodes by character data and markup which are text, the storage units provide a natural language word).

Regarding claim 11, which is dependent on claim 8, W3C discloses that the interpretation information for at least one of the sets of storage units identified by a particular logical structure of at least one of the input and output documents, encodes

respective definitions for sets of parsed characters (page 9: "the function of the markup in an XML document is to describe its storage and logical structure and to associate attribute-value pairs with its logical structures. XML provides a mechanism, the document type declaration, to *define constraints on the logical structure* and to support the use of predefined storage units ... the XML document type declaration contains or points to markup declarations that provide a grammar for a class of documents. This grammar is known as a *document type definition, or DTD ...*").

Regarding claim 12, which is dependent on claim 8, W3C discloses that the storage units comprise unparsed data (page 3, Introduction: "XML documents are made up storage units called entities, which contain either parsed or unparsed data..." page 20, Physical Structures).

Regarding claim 13, which is dependent on claim 1, as mentioned in claims 4 and 5 above, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to have modified McKindrick and W3C to include a repository in memory for storing all data related to the purchase transactions since it was well known in the art that any defined data for a program in a network should be stored in a memory of a server for using later on such as retrieving data, identifying data, or manipulating data.

Art Unit: 2178

Regarding claim 14, which is dependent on claim 13, W3C discloses that the repository of document types includes a document type for identifying participant process in the network (page 9: "XML provides a mechanism, the document type declaration, to define constraints on the logical structure and to support the use of predefined storage units").

Regarding claim 15, which is dependent on claim 1, W3C discloses that the definitions of the input and output documents comprise document type definitions compliant with a standard Extensible Markup Language XML (page 9: "XML provides a mechanism, the document type declaration, to define constraints on the logical structure and to support the use of predefined storage units ... the XML document type declaration contains or points to markup declarations that provide a grammar for a class of documents. This grammar is known as a document type definition, DTD ... the DTD for a document consists of both subsets taken together").

Regarding claim 16, which is dependent on claim 1, W3C discloses that the machine readable data structure including interpretation information comprises a document organized according to a document type definition compliant with a standard Extensible Markup Language XML (page 9: an XML document is a machine readable data structure organized according to a DTD compliant with the standard Extensible Markup Language).

Art Unit: 2178

Regarding independent claim 61, McKindrick does not disclose explicitly:

- defining a machine readable definition of an input document for a node in the network including resources to execute a process in the transaction, and a machine readable definition of an output document for the node, the definitions the input and output documents comprising respective descriptions of sets of storage units and logical structures for the sets of storage units
- providing interpretation information for the logical structures to the node

Instead McKindrick discloses applying XML in financial area to provide better bank services and utilizing XML for on-line business transactions involved with manipulation and transfer of data in the Internet such as purchase orders, invoices, and customer information (pages 1-2). The purchase orders in McKindrick are considered as input documents, and the invoices are considered as output documents of the purchase orders in business transactions. Since the purchase orders as well as the invoices, which are the input and output documents, are in XML format, they definitely include information to provide the definition for said documents according to XML structures. And since the transaction documents are in XML format, these documents are machine-readable documents and should be stored in memory of a server accessible by at least one node in the network.

W3C discloses:

- defining a machine readable definitions of documents comprising respective descriptions of sets of storage units and logical structures for the sets of storage units (page 3, Introduction and page 9: XML documents are made up of storage

units which contain either parsed or unparsed data where parsed data is made up characters some of which form character data, and some of which form markup to encode a *description of the document storage layout and logical structures*).

- providing interpretation information for the logical structures (page 9: the function of the markup in an XML document is to associate *attribute-value* pairs with its logical structures)

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to have combined McKendrick into W3C for the following reason.

McKendrick discloses the transaction documents such as the purchase orders and the invoices in XML format for a business transaction over the Internet where a user can search and buy an item on-line and W3C discloses the structures of an XML document which comprises storage units and the logical structures for the set of storage units.

This motivates to combine W3C into McKendrick for supporting the business transaction documents in XML format using the XML characteristics disclosed in W3C.

Claims 62-71 are for a method of claims 2-5, 8-12, 15, and are rejected under the same rationale.

Art Unit: 2178

Regarding claim 72, which is dependent on claim 61, McKindrick and W3C do not disclose:

- providing a parser to generate event signals in response to logical structures in the definition of the input document
- providing event listener program which respond to the event signals to execute the process

Instead McKindrick discloses the Internet business transactions via purchase orders and invoices in XML format where the purchase orders and the invoices are considered as input documents and output documents (pages 1-2).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to have modified McKindrick to include "providing a parser to generate event signals in response to logical structures..." and "providing event listener program which respond to the event signals to execute the process" for the following reason. The fact that McKindrick executes the transaction program by running the XML transaction documents which include logical structures suggests said parser and said event listener program as claimed, which are the must programs in the executing process.

Response to Arguments

6. Applicant's arguments filed 5/6/04 have been fully considered but they are not persuasive.

Applicants argue that McKendrick does not teach or enable any machine readable specification of an interface where the machine readable interface is embodied in a data

Art Unit: 2178

structure, and the combination of McKendrick with the XML specification does not suggest whether a purchase order or invoice should be considered an input document or an output document or how to apply XML to solve business problem (Remarks, page 9).

Examiner respectfully disagrees.

McKendrick discloses the combination of business transactions with XML application via the fact that many business services such as financial institutions, banks uses XML application in business transactions, and XML is believed by experts as a boon for e-commerce application (pages 1-2). McKendrick also discloses applying XML in financial area to provide better bank services and utilizing XML for on-line business transactions involved with manipulation and transfer of data in the Internet such as purchase orders, invoices, and customer information (page 3). The purchase orders are considered as input documents since it was well known that a purchase order is formed from the purchase data inputted by a user to a business site. The invoices are considered as output documents of the purchase orders in business transactions since it was well known that the invoices are itemized bill for the items in the purchase order and would be sent out to customers. Since the purchase orders as well as the invoices, which are the input and output documents, are in XML, they definitely include information providing the definition for such a document according to XML structures including respective descriptions of sets of storage units and logical structures for the sets of storage units of XML format as disclosed in Extensible Markup Language (XML) by W3C. And, since the transaction documents are in XML format and these business

transactions are carried out online for manipulating and transferring data on the Internet, these business transactions as well as the transaction interface with machine readable specification for carrying out the business transactions must be stored in memory of a server accessible by at least one node, which can be a client terminal, in the network.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Business Editors, *XML Leader WebMethods Commends RosettaNet; Company Joins RosettaNet as an Architect Partner*, Business Wire, Jun 8, 1998, page 1.

Art Unit: 2178

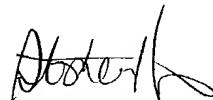
DataChannel, Inc., W3C Formally Acknowledges DataChannel's Submission of WebBroker Specification for Application Linking Unified XML Component Object Model for the Web, PR Newswire, May 15, 1998, page 1.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cong-Lac Huynh whose telephone number is 571-272-4125. The examiner can normally be reached on Mon-Fri (8:30-6:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Hong can be reached on 571-272-4124. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Clh
9/20/04


STEPHEN S. HONG
PRIMARY EXAMINER